

**SYSTEM AND METHOD FOR GENERATING COMPOSITE
SUBTRACTION IMAGES FOR MAGNETIC RESONANCE IMAGING**

Abstract

5 In time-resolved contrast-enhanced magnetic resonance angiography, a measure quantifying image quality provides a basis for generating a linear filtered composite image by facilitating selection of a mask and an arterial phase image for subtraction. Filtering of individual pixels of a temporal series of images provides enhanced contrast in a single image by allowing the temporal behavior of the pixel
10 intensity to denote representation as an artery, vein or background tissue. Motion artifacts are suppressed by re-registering sequential images, adjusting weighting before averaging and subtraction and filtering the Fourier data to eliminate data corrupted by motion or other phenomena.